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ALL INDIA GRAND JURY AWARD IN "QUALITY OF CAMPUS LIFE"



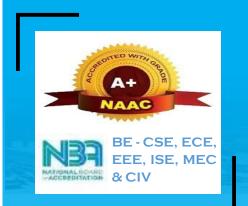
**32ND** AMONG TOP 100 PRIVATE ENGINERRING INSTITUTIONS





# **CMR INSTITUTE OF TECHNOLOGY**

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Send your Feedback and suggestion on CMRIT Connect at <u>newsletter@cmrit.ac.in</u>



#### **Editorial Board**



Prof. Manoj Challa Head– Student Club & Alumni Cell



Prof. Prasad B S Asst. Prof, ISE



Prof Anand R Asso. Prof. ISE



Prof. Tiakaba Jamir Asst Prof (ENG)

#### From Editor's Desk

Welcome to the Volume-3, Issue-1 of CMRIT Connect a quarterly newsletter of CMR Institute of Technology, Bangalore. As we head up into our new academic year (2019-20), we are pleased to continue to bring our readers - students, faculty, staff, well-wishers, news on CMRIT and its activities. In this issue, we have incorporated department technical activities, club activities, social and industry related activities. Graduation Day of 2019 and Inaugural Function of the new academic year were some of the biggest events which have been highlighted in this issue. It has thrown light on various achievements which have been bagged by our faculty and students and brought laurels to the college. It projects in a nutshell of all the important events happened during the last three months. Special thanks to all the contributors of this newsletter.

#### Wish you all a happy reading!



# MESSAGE FROM THE PRINICIPAL

Dear Reader,

The new academic year 2019-20 has just begun and all CMRITians are rejuvenated to take the next big leap towards its vision. We are happy

to share that CMRIT has been continuously ranked as one of the top private engineering institutes across the country both by govt. and private agencies.

To meet our vision, many initiatives are planned for the development of students, faculty and the institute. We are giving key focus on 'Innovation and Entrepreneurship' this academic year with setting up of teams, facility and processes to create a culture of innovation across the organization. Multiple training sessions on design thinking, intellectual property, and entrepreneurship are planned during the year. Our fourteen centres of excellence are also providing a good eco-system to our students and faculty to excel in their research activities.

CMRIT recently organized 'Techno Meet for Society' and showcased thirty-six interesting projects which were well received by general public and experts. Our students and faculty have also developed and deployed technical projects in our adopted village 'Marasandra' to resolve some of the issues faced by the villagers. It is a pride for us that multiple students' projects are now getting selected and awarded at various state level and national level competitions such as Elevate 100 – GoK and MHRD Innovation cell - GoI. We are among very few engineering institutes across the country which are able to cross these competitive barriers.

CMRIT has also taken up the challenge to support physically challenged people by creating solutions with assistive technology in collaboration with 'Enable India'. We are also supporting various PU school students by training them at our Maker-space, providing expert talk on science and technology as well as arranging competitions to sharpen their minds.

To enhance the employability of our students, multiple training on aptitude, soft skills, programming, and core skills were organized in the month of July and August through our Tieyour-LACES program. These training are helping our students to clear higher thresholds set by the companies visiting us for campus placements.

We have put all significant activities of the last quarter in this edition of CMRIT 'Connect'. Hope you will enjoy reading!

Dr. Sanjay Jain Principal

## MESSAGE FROM THE VICE PRINICIPAL

#### Dear Reader,

The newsletter "CMRIT Connect" is a great platform to showcase our student and staff achievements in the last quarter. I take this opportunity to congratulate all our achievers and wish them a great

success. CMRIT is one of the institutions importing high quality teaching for all round development of each and every student. All our activities focused to achieve our vision in short span of time.

We look forward for your great support in building this institution and nation.

Dr. B. Narasímha Murthy Více Príncípal



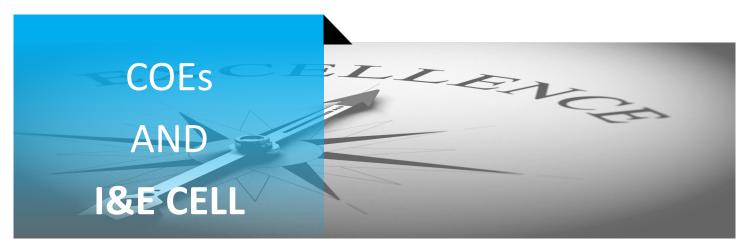
# HOD'S COLUMN

CMR Institute of Technology, Bangalore has always been vibrant with activities and academics. The strength of the college lies in the highly motivated students who understand the dynamics of the industry and hone their skills accordingly. In this spirit, the faculty

and staff meticulously teach, train, guide and mentor the students to facilitate their career growth. CMRIT CONNECT provides a platform for exposing the merits and academic achievements of the faculty and students. This would definitely create an impact in the minds of readers, by way of providing larger visibility and dimension to our college. I appreciate the efforts and congratulate our students, and faculty for having put this together. I wish them all a bright and successful career.

Dr. K. Chítra Professor & Head Department of EEE





#### COE MATERIAL SCIENCE

- Mr.Shreyas Gopal and Mr.Vamsi Sai, working on "Purification of Automobile Exhaust Gas" project visited BITS Hyderabad for catalysis reactions using the composite catalyst being developed and successfully completed.
- Dr. B Narasimha Murthy, Dr. Chaitanya Lekshmi Indira and Prof. Vinay visited AICTE for submission of proposals

#### COE SENSORS AND NANO ELECRONICS

- Mageshwari K working on Optical Sensor project on Heavy metal detection in water for Elective pollution control presented her project and exhibit the demo at Ramaiah Institute of Technology, Bengaluru on 13th of June, 2019 as part of FAER-Mcfee Award program
- Dr. B Narasimha Murthy, Dr. Chaitanya Lekshmi Indira and Prof. Vinay presented Proposal "Optimal Water Use in Industrial Sectors " submitted to DST before expert panel.
- National Symposium on Electrochemical Science & Technology at IISc, Bengaluru.

#### COE INTEGRATED CIRCUITS

 Prof.AGALYA V and Prof.Vanaja Shivakumar
 submitted National Patent on "Sustainable Universal Rejuvenate Assess and Nurture Educational Kit"



Dr. Nasir Abdul Quadir served as Journal Reviewer for IEEE Sensors and IEEE International Circuits and Symposium.

#### COE METALLURGICAL ENGINEERING

 Prof.Prashant S Hatti of Mechanical department published research paper titled "Microstructure and Hardness behavior study of carbon nano tube in Aluminum nano composite" in ICECA-2019 (IEEEConference).

# COE INTELLIGENT HUMAN COMPUTER

- Dr. Abdul Rasheed of MCA department published research paper titled "Comparative analysis of some machine learning models" in Springer International conference on intelligent computing and smart communication technologies.
- Dr. V Ilango, of MCA department had been invited to deliver plenary speech on "Road Map of Optimization Problem Solving Techniques" in the International Conference on Computing Modelling, Simulation and Optimization" at Shaw Alumni Foundation House, Singapore National University, Singapore.

#### COE ADDITIVE MANUFACTURING

Additive Manufacturing and Department of Mechanical Engineering organized AICTE sponsored Two weeks Faculty development program on "Advancement In Additive Manufacturing" from 1st July 2019 to 12 July 2019. Dr.U.Chandrasekhar & Program director, Wipro Technologies Ltd, Mr.Adithya, Project Engineer, M/S Tvasta Project Management and Consultancy, Dr.Rajasekhara Patil, Professor, CMR University, Bangalore, Dr.S.K.Verma, Head, Additive Manufacturing Technology, CMTI Bangalore, Mr. Srimanta Bauri, Research Scholar IISc Bangalore, Mr.Shrayons Khot, AMACE Solutions,



Bangalore, Dr.Mrityunjay Doddamani, Professor, NIT K, Suratkal, Mr.Bharat, Coral Technologies, Bangalore, Mr.Jeevan Kumar, GTRE, Mr Nagesh, GTRE, Mr.Sudeep Pradhan, Technical Leader AM, GE Transportation, Dr.Siva, GE, Ms.Akshatha , Team member Additive Manufacturing , GE, Dr. Suyog Jhavar , Associate Professor, ATRIA College of Engineering, Bangalore. Mr.Gururaj, ARCI, Hyderabad, were the external resource persons for the FDP.



#### COE FINANCIAL MARKETS

Financial Markets CoE had organized expert talk on Stock Market Operations by Mr. Raju V Vernekar and Mr. Harish Bhat Zerodha Stock broking firm, Bangalore on 28 August 2019



#### COE EMBEDDED SYSTEMS

 CoE Embedded system had organized a industrial visit to Nokia on 5G Summit.

## COE INTELLIGENT HUMAN COMPUTER INTERACTION

• Prof. ILANGO V attended UX-UI design Conference at Hyatt Centric MG Road Bangalore



• Prof. Abdul Rasheed served as Journal Reviewer for Anurag Group of Institutions, Hyderabad

#### COE INTELLIGENT ROBOTICS SYSTEM

- Prof. Velrajkumar P published research paper titled "Development of Smart Number Writing Robotic Arm using Stochastic Gradient Decent Algorithm" in International Journal of Innovative Technology and Exploring Engineering (IJITEE - Scopus)
- Prof. Velrajkumar P of EEE department received Sir CV Raman Life time Achievement National Award 2019
- Prof. Velrajkumar P served as Journal Reviewer for IEEE International Conference on System Engineering and Technology
- Prof. Velrajkumar P of EEE department served as Journal Reviewer for Journal of Engineering Science and Technology, Malaysia



Prof. Velrajkumar P and Prof. Sanitha Michail along
with students AYESHA BANSAL,CHETAN T N ,Kiran
S M ,Panchal Viral Ashok ,PAWAN V ,SNEHA
C ,SPURTHI RAJ N,JYOTHSNA S ,ALISHA KULKARNI ,ANUBHAV SHARMA of CMR Institute of
Technology had the golden opportunity to take part in
a student exchange programme for 14 days at Multimedia University in Malacca, Malaysia between 28th July
and 10th August 2019.



## INNOVATION AND ENTREPRENEURSHIP (I&E) CELL

• A book on "Project Management by Panchatantra", was inaugurated by honourable Justice Santosh Hegde,

- Organized Review paper writing phase-1 & 2
- Organized a 4-day symposium on Elevate 100 training, first pitching preparation from 12th June to 15th June 2019.
- Organized 3-day Design thinking workshop for Ekya PUC students from 2nd July to 4th July 2019.
- Organized 2-day Design thinking workshop for Ekya PUC students from 11th July to 12th July 2019.
- Organized 2-day Product Development Workshop on 25th & 26th July 2019.
- Organized a 2-day symposium on Elevate 100 phase-2 from 26th June to 27th July 2019.
- Organized Training Programmes on Design Thinking by Panchatantra
- Dr. Phani Kumar Pullela presented a talk on "project management by Panchatantra" and "GI a source to create million jobs to Indian youth" at 14th Annual Project Management Conference in Bengaluru,
- A talk was given at an event "Tech4seva" held at IIT Delhi, on the process and methodology followed by CMRIT I&E cell for filing GI.

• Aaditi stonesoup solutions Pvt Ltd are into making composting solutions. An MoU between CMRIT and the company was to create a solution for creating a better mechanism and structure for composting.





• A MoU between Rekke Solutions Pvt Ltd and CMRIT, agreed upon creating a miniature version of washing machine for cleaning reusable sanitary pads.

• Ramesh G N, alumni of Civil Department, CMRIT, has started a startup "An Hestia, Bangalore". He received 2 lakhs from "AICTE SAMRIDDHI", from AICTE, to scale up his innovative technology.

• Anand Raja C, alumni of Mechanical Department, CMRIT has started a startup "Mew Thetis, Bangalore". He received 2 lakhs from "AICTE SAMRIDDHI", from AICTE, to scale up his innovative technology.

• Raju J, alumni of Mechanical Department, CMRIT has started a startup "Sew Aphitrite, Bangalore". He received 2 lakhs from "AICTE SAMRIDDHI", from AICTE, to scale up his innovative technology.

• Venkatesh Murthy A, alumni of Mechanical Department received 2 lakhs from "AICTE SAMRIDDHI", scale up his startup "Sew Din Harmania, Bangalore".

• Prof. Chidhananda R S, Prof. SRINIVAS REDDY MUNGARA and Dr.Phani Kumar Pullela filled a national patent on microscope, Submission number -318780-001

• Dr Phani Kumar Pullela received a grant of Rs. 12 lakhs for the project MTB voc detection by fluorescence nose(F/nose) f by DST nanomission

• Dr Phani Kumar Pullela received a grant of Rs. 1.16 lakhs for the project Nano dip stick by DBT Foldscope.

• Dr Phani Kumar Pullela received a grant of Rs. 4,06,277 for the project Sewage Water Treatment by GCK.

• Prof. Srinivas Reddy M received a grant of Rs. 4,02,897 for the Water Atomizer by GCK.

• Organized training program on "Design Thinking by Panchatantra" by Dr. Phani Kumar Pullela on 23 rd and 24th Aug 2019.



Organized One day workshop on "Design Patent" by Mr. Swapnil Gawande, Attorney with support from AICTE samriddhi, CMRIT, iSquareD on 30 h Aug 2019

# WORKSHOPS FDP







• Department of Mathematics (BS) organized a workshop on "Introduction to Grammars of Formal Languages" on 26<sup>th</sup> July 2019 by by Prof.Prathap of Mathematics department, CMRIT.

• Department of Chemistry (BS) organized One Day Faculty Development Programme on "Advanced Material Characterization Techniques" on 29<sup>th</sup> July 2019.

• Department of Physics(BS) organized One Day Faculty Development Programme on "Hands on Training on making teaching aids for UG Physics curriculum" on 22<sup>nd</sup> July 2019

• Department of ECE organized VTU, TEQIP 1.3 sponsored One week workshop on ""Preventive and Breakdown Maintenance of Electronics Equipments for Technical Staff" on 19th to July 2019. Dr.Shylaja, Scientist F, GTRE; Dr.Ananda CM,Jt.Director, NAL; "Dr.Bhanu Prashath, prof and Head Dept of Bio medical Electronics, BMSCE; Mr. Kedarnath and Mr. Lokesh, Live wire; Mr. Ravi, ALS technologies were the external resource persons for the workshop.

# DEPARMENT TECHNICAL ACTIVITIES

#### Department of **Basic Science**:

- Basic Science department organized Guest Lecture titled "Nanotechnology and its applications" on 3<sup>rd</sup> June 2019 by Dr. Dinesh Rangappa, Department of Nanotechnology, VTU regional centre Meddenahalli, Chikkabalapur.
- Department of Mathematics (BS) organized an interactive sessions on "Supply chain management" on 9<sup>th</sup> & 25<sup>th</sup> July 2019 by Mr.Dilli Babu, founder and CEO of Nvipani Technology solutions.

#### Department of Civil Engineering:

• Department of Civil Engineering, conducted a Guest Lecture on "Career guidance on Software based skilled job" by Mr.Narasimha, Director, Regalia Civils on 24th August 2019.





- Department of Civil Engineering in association with ICI Bangalore conducted a guest lecture on "Highway Geometric Design" by Mr.Shamanth H P,Highway Design Engineer, L&T- EDRCL Bengaluru on 27th August 2019.
- Department of Civil Engineering in association with ICI Bangalore conducted a guest lecture on "Nondestructive testing on concrete structures" by Mr.Shreenivas S Iyengar, ounder Director of M/s Stredant Technoclinic Pvt. Ltd on 19th August 2019.

# Department of **Electronics and Communication Engineering**:

 Department of ECE had organized the guest lecture on "Bridging of gap between academics And Industries" by Akshay Prakash Robotics Trainer, Sirena Technologies on 17th August 2019.



- Department of ECE had organized the guest lecture on "Design Thinking and Skill Development" by Mani Lakkaraju and Divaspati Bhat(CEO), Solworks on 07th August 2019.
- Department of ECE had organized the guest lecture on "Automotive Technoogy" by Pavan Kumar Naik, General Motors on 24th August 2019.

#### Department of **Computer Science** and and Engineering:

 Department of CSE had organized the guest lecture on "The perks of polishing foreign language and technological skill together" by Ms. Shomia Biswas, Team Lead Private Banking, J.P. Morgan on 24<sup>th</sup> August 2019.





# Department of Master of Computer Application:

 Department of MCA had organized the guest lecture on "Block Chain" by Mr. Sudipto Das,Program Manager, MU-Sigma, Bangalore on 17th August 2019.



 Department of MCA had organized the guest lecture on "Robotic Process Automation(RPA)" by Mr.Sanesh and Ms.Subhashini, Trainee huawei, Bangalore on 13th August 2019.  Department of MCA had organized the guest lecture on "Data Science" by M Mr. Bonson Sebastian Consultant,TCS. on 24th August 2019.



 Department of MCA had organized the guest lecture on "Tableau" by Mr.Gopichand, Technical Lead, Brillio Solutions Pvt Ltd. on 31st August 2019.

# Department of Information Science and Engineering:

 Department of ISE had organized the guest lecture on "DevOps" by Ms. Pushpa Priya, DevOps Architect, SAP LABS on 24th August 2019.



- Department of ISE had organized the guest lecture on "Analytics" by Mr Ganesh Mahadevan, AVP, ATOSon 24th August 2019.
- Department of ISE had organized the guest lecture on "Micro community platform development for business predictive analytics." by Adityatej Dhaliwal and Zoheb Ahmed, CEO and CTO, AIMEO on 26th August 2019.

#### Department of **Mechanical** Engineering:

 Department of ME had organized the guest lecture on "Entrepreneurships' and changes in India's Growth" by Dr. Ranganath, Deputy Registrar, Govt. of



Karnataka on 09th August 2019

### Department of **Electrical and Electronics Engineering**:

 Department of EEE had organized the guest lecture on "Recent Trends in the field of Electrical & Electronics" by Uday Bhargav, Director, GenEd Group on 31st August 2019





# IQAC (INTERNAL QUALITY ASSURANCE CELL)

- IQAC team organized 5 days "The CMRIT staff orientation program" from July 15<sup>th</sup> to 19<sup>th</sup> 2019. Around 250 faculties from all the departments attended the program to learn about various initiatives of CMRIT.
- IQAC team organized Workshop on Cyber Security and consumer awareness by Mr.I.L Narasimha Rao, SeniorProject Manager, Cyber Peace Foundation on 1st Aug 2019.
- IQAC team organized activity session on Understanding Outcome Based Education on 6th Aug 2019.
- IQAC team organized CO-PO mapping review session on 7th Aug 2019.





#### MAKERSPACE

 Students and Faculty of Government PU college, Hoodi, Bangalore have visited Makerspace on 17<sup>th</sup> June 2019. Working of Laser cutter, 3D printer and basic uses of power tool, machine tools was demonstrated.



- Students of govt. PU College, Hoskote along with lecturers have visited Makerspace, Physics, Chemistry labs On 8th July 2019.
- Ryan International School class XII students visited Makerspace, CoE-additive manufacturing, Civil, Physics, Chemistry labs on 10th July. Students got hands on training on Laser Cutter and 3D printing technology.
- Training was organized for all 1st year students for basic use of power tool, Machine tools and working 3D printers, Laser cutter

#### FOSS CELL

FOSS Cell organized a invited Talk session on "Free software, Free knowledge and FSMK" on 29th Aug 2019. Mr.Naveen Mudunuru ,Screatary ,FSMK addressed the gathering by giving information about free software ,free knowledge and their benefits about free software movement Karnataka.

#### PBC CELL

CSI student chapter organized a hands-on session on
"Git and Github" by Mr. Rajat Agarwal, Business
Analyst, Deloitte, Mr. Ron Paul Jackson, Associate
Consultancy, Ellucian, Mr. Chirayu, Associate S/W
Developer, Ellucian, Mr. Varun Kumar Saini, Scholar,
SAP Lab, Ms. Aditi Aurora, Scholar, SAP Lab, Ms.
Prachi Sukla, S/W Developer, AMD, Ms. Pragyan
Gupta, Engineer, Mindtree on 17<sup>th</sup> August 2019.



 IE(I) students chapter organized an Expert lecture on "Development of universal motors" by Ms. Sujana M, Intern, IFB Motor Division on 24<sup>th</sup> Aug 2019



#### EE&C CELL

Students of CMRIT came together to prepare innovative projects for the adopted village Marsandra to improve the living conditions of the villagers residing there on 24th August 2019. All the 8 student teams went for the final site visit for the deployment and implementation of the innovative projects.7 teams that managed to complete the deployment and implementation successfully are as follows: 1. Mosquito Repellant Device 2. Rain Water Harvesting System 3. FarmerMate App 4. Automation in water management system in agriculture 5. Mobile App for villagers 6. Pedal Operated flour mill 7. Biogas Plant

## **STUDENT CLUBS**

#### **ETA , TAQ CLUB (ECE)**

- **ELECTROQUIZ**
- **Electronics for Healthcare** •
- **Technical Talk** •
- **Familiarization of Analog Circuit Design** 0
- Tool flow explanation of circuit design software
- **Tool Quiz on Circuit Solving**
- **Sequel Circuit Simulation Software** •
- PICTALK •
- **Technical Warriors** •
- **Fixing Bangalore** •
- **Tech Extempore** 0
- **SLIDUO** and many more

















FEEE CLUB (EEE)

Debate

**Tech Quiz** 

- Treasure Hunt
- **Technical Crossword**



### SOCE CLUB (CIVIL)

- Wall Designing workshop ٠
- Workshop for making Brick Bonds ٠





#### ACE, MOZIETY CLUB (CSE)

- Logo quiz
- Web Scrapping

#### SME CLUB (ME)

- **Guest Lecture**
- Auto Quiz

#### **TECHNOLIX CLUB (TCE)**

Arduino workshop



#### **PROTOCOL CLUB (MCA)**

- Brain teaser
- Just A Minute (JAM)
- IT Quiz
- Poster Presentation
- Crypt Ur Mind
- Dazzle Coding



#### GOOGLE DSC, CODING NINJAS, RISE, GLUG CLUBS (ISE)

- Google organized Cloud Career Readiness Program
- Online Coding Competition
- Cloud study Jam-Google Cloud
- Web Development
- Google DSC Leads Live Viewing
- Web designing using Python
- Competitive Coding
- Hands on Training on GIMP







#### HUMAN RESOURCE , MARKETING CLUB (MBA)

- SPLIT HAIRS
- Team Building
- Brand Bro





# CONNECTING TO THE INDUSTRY

### INDUSTRY VISIT

 Basic Science Department organized Educational visit to National Aerospace Laboratories on 6<sup>th</sup> June 2019



 ME Department has organized one day Industrial Visit to Toyoto Plant on 28<sup>th</sup> Aug 2019 • Department of Mathematics organized an educational visit to TIFR on 21st August 2019



 Department of ISE had organized an industry visit to C-DAC, Banagalore, A Seminar on IETF was provided to students by the expert team at C-DAC on 8th August 2019.





# CONNECTING TO THE COMMUNITY

#### MOU WITH ENABLE INDIA

CMR INSTITUTE OF TECHNOLOGY AND ENABLE INDIA entered into MoU to help society with developmental disabilities. The MoU aims to showcase how CMRIT going forward will work for disabled sections of our society and with help of our Engineering students from multiple disciplines and will craft solutions which will benefit them and at the same time embed "Karuna" in their minds. Karuna means Compassion and we want to accouter our students with compassion while they develop technologies in future. We want our students to develop empathetic Digital solutions.



#### TECHNO-MEET FOR SOCIETY

CMR Institute of Technology, Bengaluru hosted "Techno-Meet for Society" in its campus on 27 July 2019. The meet was inaugurated by Dr. E S Dwarakadasa, Chief Operating Officer KHMDL, Mr. Parameshwaraiah, Chief Engineer BBMP and Mr. Ramprasad V, Co-Founder and Convenor of Friends of Lakes, Bengaluru along with Principal, Dr. Sanjay Jain and Vice Principal, Dr B Narasimha Murthy. In the meet, societal projects carried



out by faculty and student community of CMRIT were exhibited and the chief guests had one-to-one interaction with the faculty and students. The scope of each project and how the projects could be escalated to the needs of public were discussed by the experts. The meet also witnessed experts from NGO's IEEE, Electrochemical Society of India, Irrigation Department, BMRCL, NIRM, PWD, Construction firms like Salarpuria, and software industries like Infosys. A few of the projects like Farmer mate, H-W Composites, Sustainable building blocks, Water atomiser, Laboratory scale model of smart grid, Solar tree caught the attention of the public. IoT based projects such as Women security and abuse avoidance, Smart street light, Robot dog with object detection were appreciated by the guests and the projects such as teaching aids for blind, video sensors for human-wildlife conflict resolution. low cost phone jammers, reconstruction of speech and music signals were appreciated by the public.

#### YOGA DAY

Yoga sessions as part of Yoga Day was organized on 8th June 2019.



#### OLD AGE HOME VISIT

Department of Mathematics and ISE organized a social activity of visiting an old age home "Countree Side Home", Bangalore. Students of 1st, 3rd 5th and 7th semesters students and faculties contributed a sum of rupees 22,600 for helping them out.



#### TECHNOVENZA 2019

An event was organized for PU students to exhibit their technical and scientific skills at CMRIT on 29th Aug 2019.



#### INNOVATIONS IN MATHEMATICS

Department of Mathematics organized an outreach activity of a talk on " Innovations in Mathematics" by Prof. Shankar Narayan , to students of first PUC of CMR National PU College, ITPL on 17th Aug 2019.

#### 73RD INDEPENDENCE DAY AT CMRIT





Academic Year 2019-20 started with good number of Programming Language courses in Java, C++ and Python campus placement drives in the month of August. Totally (L3) for all students interested in IT Jobs. After L2 & L3 19 companies placement drives happened for CMRIT trainings, students are guided to have self-driven students in the first month of this year. Both software Programming Language Proficiency training (L4) in product companies like Eurofins, MScripts, Daily Hunt, language of their choice, after which we plan to have SAP, Vmware, Surewaves as well as large software service Advanced Topics (L5) trainings like Full Stack companies like LTI and ITC InfoTech visited our campus. Development, Cloud Computing, Machine Learning. After Expecting many more diversified companies to visit every training, we had Programming Skills assessment CMRIT through the year.

TYL training and effort was focused on getting students assessment tests. ready for IT jobs. In addition to TYL Aptitude & Soft Skills For Core Engineering jobs, MECH, CIVIL, EEE, ECE/TCE We first started with 1 week of Programming Government PSUs/PSEs. Fundamentals course (L2) followed by 1 week of

tests (L2, L3 & L4) to ensure that students are ready for With so many job opportunities available for software placement drives of software jobs. Over 600 students have engineers in the industry, specifically in Bangalore, our gone through L2 & L3 trainings and cleared L2 & L3

organized in student's pre-final year, we had aggressive departments have started Core Skills trainings for Core Programming Skills training programs in summer break. Engineering Jobs in Private Organizations as well as in



## "Space tourism and Space adventure to offer job opportunities" – A S KIRAN KUMA Padmashri Awardee

# GRADUATION DAY 2019

CMR INSTITUTE OF TECHNOLOGY Celebrated its 16<sup>TH</sup> GRADUATION DAY on 9<sup>th</sup> June 2019.Todays budding engineers are the future of this country. They must build a vibrant nation through innovations in Science and technology. India is at the forefront of Space Technology. Space tourism and Space adventures are going to offer huge job opportunities, said Padmashri A S Kiran Kumar. He was addressing graduating batch 2019 at CMR Institute of Technology. He enlightened the budding engineers on success story of worlds premier space organization ISRO. Today ISRO ranks among the top nations in developing advanced satellites, rocket systems to carry 5 ton satellites. He highlighted visionary scientist Vikram Sarabhai who laid the foundation for use of space technology for creating better facilities, transparent administration and to create wealth for the country. He encouraged the students to remain life long learners. He felicitated university rank holders , best project winners and other achievers.

Earlier Dr.Sanjay Jain ,Principal welcomed the gathering and highlighted achievements of the students. Dr Shivakumar, Vice Chancellor, CMR university administered the Oath to the graduands. Trustees of CMRIT, Industrialist and academicians were present on the occasion. 1130 engineering and management students participated in the ceremonial procession. Pradhan Gowda ,a graduating student of Computer engineering who was in a jubilant mood mentioned that he is planning to pursue software career. My teacher's constant



guidance and encouragement has enabled me to achieve this success-he said. Ms.Sukanaya who secured first rank in the university mentioned that she has aspirations to pursue higher studies. Priyanka Srivastava secured highest package job offer of 18 Lakhs shared her experiences of meticulous planning, practical skill sets necessary to get selected in top MNCs. I am glad that more than 700 students of my batch are placed. Experience of carrying out several projects in the college will help me to pursue research, she said. Mrs.Lalitha, a proud parent mentioned that her daughter has been transformed into a core professional who can take up challenges in the Industry. "Youth empowerment will reform the county "

### -JUSTICE N SANTHOSH HEGDE Former Lokayukta, Karnataka

# INAGURAL OF ACADEMIC AND INDUCTION PROGRAMMES 2019

The Inauguration of first year BE programs was held on 03rd August 2019. The Chief guest for the meaningful program was Honorable Justice N Santosh Hegde former lokayuktha Karnataka, The programme commenced with the lamp lighting by the Dignitaries including Dr. Sabitha Ramamurthy Chancellor CMR University, Dr Sanjay Jain Principal CMRIT and Dr.B Narasimha Murthy Vice principal CMRIT, The parents and teachers were briefed regarding the history, growth and milestones, academic infrastructure, curriculum design, placements of CMR Institute of Technology

The Principal of CMRIT, Dr Sanjay Jain welcomed the Chief Guests, parents and students, The chief Guest N Santosh Hegde, touched the heart of the audience by his motivational speech. Country suffers from wide spreading corruption, probably 10 % of budget reaches common man, and He encouraged the students to build a society which boycotts corruption. He advised them to achieve contentment by avoiding greed. He reminded the audience that acquiring humanism is the way to enlightenment. He pointed out that, greed is the reason for all modern day maladies and has chased away the humanity in human beings. Hence creating a greed-free society is the need of the hour. N Santosh Hegde also shared his real life experiences while working as Lokayuktha of Karnataka.

Congratulating over more than 140 achievers in



academics, projects, sports , he appreciated innovative projects such as Decentralized Voting app, Neural network for gaming, Metro billing system and others. He released Project management through Panchatantra a novel book on managing targets to achieve success, written by college students.

Dr Sabitha Ramamurthy Chancellor, CMR University who was present on the occasion mentioned that every branch of engineering has potential to provide solutions to real life problems. Learn to manage your life while facing several challenges, she said. She stressed the need life skills for engineers. She observed that excellence can be achieved with talent and right attitude. Budding engineers need to inculcate passion for learning, creative thinking and continuously update knowledge. Stressing the need for large scale Industry- Institution Interaction, he encouraged budding engineers to concentrate on soft skills. She felicitated academic toppers and innovators.

An orientation programme was held to enlighten students and parents about the course structure, examination details and most importantly their responsibilities. Principal Dr Sanjay Jain interacted with parents and students on current scenario in the industry, challenges and placement opportunities. He stressed that students must take up research and elaborated on the research facilities provided in the college. Many parents and students who were present felt happy over learning about their responsibilities and future prospects. First year student Aditya vaibhav who is interested in pursuing higher education said that 'this interaction has given me lot of useful information'. Ms Harshita, a student of Electronics and communications engineering mentioned that she is excited to see lot of job opportunities in this field.

#### ORIENTATION SESSIONS

- Learn to realize your problems and take tough decisions by Dr. George Williams, Professional Counsellor
- Science-Engineering- Innovations by Dr.Raveesha
   K
- General Aptitude Goal Setting Leadership by Mr.Sachin, Senior Trainer
- Lessons for careers in Technology by Dr.Sumeet Kumar, CMRIT Alumni & CEO Innatera Nanosystems, Project Manager & Research Fellow, Circuits and Systems Group, Delft University of Technology, The Netherlands.





- Objectives of Clubs Activities for 2019 by Prof Manoj Challa and team
- **TEDx -CMRIT Introduction** by Prof G C R Kartheek and Team.
- Stress Management session by Dr. Ravish H, Asst.Professor, Neurochemistry, NIMHANS Specialist Doctor, NIMHANS.
- Yoga Session- YOGA for all Ms. Sanjana
- Engineering to Astronomy by Dr. Mayuri CMRIT Alumnus Post Doctoral Fellow, Physics Division Lawrence Berkeley National Laboratory
- **Criminal Justice System** by Mrs.Anhubha Srivastava, Advocate



# STUDENT ACHIEVEMENTS

#### CENTUM ACHIEVERS

Centum achievers in the VTU examinations held during June-July 2018-19.

Advanced Calculus and Numerical Methods				
SAHANA SR	1CR18EC175	MANSI THAKUR	1CR18IS087	
UMME AYMAN	1CR18CS176	RASHMI M	1CR18CS134	
UMAR FAROUQUE	1CR18IS162	RISHITA RAHA	1CR18CS137	
ANANDARSHAN	1CR18CS020	RAGAM	1CR18IS112	
HEBBALI		VAIBHAV SAI		
		RAM		
BHARATH J	1CR18CS037	SHIVANI M V	1CR18CS152	
BINDUPRIYA	1CR18CS040	SARTHAK GUPTA	1CR18IS130	
BHARATHI G	1CR18IS030	SHALINI PANDEY	1CR18IS135	
MANISHA	1CR18CS095	CHAITHRA	1CR18EE023	
MANIKANDAN				

Computer Aided Electrical Drawing				
MANISHA N	1CR16EE042	JANANI R	1CR16EE031	
SAKET VAIBHAV	1CR16EE065	SUDHIR KUMAR RAJU	1CR16EE083	
SHAKTHIVEL R	1CR16EE072	SHASHANK V	1CR16EE076	
KAVYASHREE K	1CR16EE034			

Engineering Chemistry		
ANANYA	1CR18CS021	
NARAYAN		
SHIVANI M V	1CR18CS152	
SOURITA	1CR18CS162	
PODDAR		

Engineering Mathematics			
KUMARI TANYA	1CR17TE017		
HABIBA AHMED	1CR17IS032		
HITESH	1CR17CS050		
BHALOTIA			
RAMYA T	1CR17CS107		
SHRUTHI SINGH	1CR17CS143		
SANJANA M	1CR17ME071		
VANSHIKA GHAI	1CR17ME084		

#### PRIZES, AWARDS AND PUBLICATIONS

- Mohammed Rifas S, Shubham Goyal, Vaibhav Padmanabha of CSE department won FKCCI MANTHAN on 12th June 2019
- Mr. M. Hari won Best Paper Award for "Harmonic Analysis of a Novel 17 - level M21 fed three phase Induction motor" in ICECA-2019 (IEEEConference)
- Patani Rucha Sharadkumar and Ramya T of CSE department under the guidance of Prof. Bharti Sharma received 2nd prize for Mathematical



Google Search Engine" at Christ Convergence 2019



Mamtha M V and Navya R of CSE department under the guidance of Prof. Bharti Sharma received 3rd prize at Christ Convergence 2019

Sejal Ksheer Sagar and Shivani M V of CSE department received 2nd prize at Event X,IT quiz, Elevator Pitch at Christ University, Bangalore

- Shivani M V of CSE department received 2nd prize at Tag Coding at Christ University, Bangalore
- Rekha B of CSE department won 1st prize in All India Junior Bridge Championship
- Mohammed Rifas S ,Shubham Goyal, Vaibhav Padmanabha of CSE department awarded first runner up with a cash price of Rs. 90,000/- for the product "The Universal Water Atomizer" by Gotyche Technology
- Gangadhar R ,Harshitha B ,K.Krishna Priya, Mahesh H C of EEE department received financial assistance of Rs. ٠ 5000/- for the project titled "Power Theft Monitoring and Control using IoT technology" from VTU
- G Harshavardhan Yadav , Hariharan A , Vinay K A of EEE department received financial assistance of Rs. 5000/- for the project titled "The Design and Development of chassis for Hybrid Electric Vehicle" from VTU
- Souptik Mukherjee Secured 3rd place in JAM on the topic "Blue Gold: A long walk to water" at an inter-college fest . in Mount Carmel College.
- Souptik Mukherjee Won Zonal level Award at Speak for India Debate competition organised by Federal Bank.
- Souptik Mukherjee Won zonal level Mr. & Ms. Thomso in "Thomso-19: Karwaan" organised by IIT ROORKEE.
- Abhinav Suresh of ME department published research paper titled "Value stream mapping & Manufacturing process design for Elements in an auto-ancillary unit – A case study in 2nd International Conference on Materials, Manufacturing and Modelling, ICMMM-2019 Jointly organized by VIT Vellore India

# FACULTY

# ACHIEVEMENTS

#### **RESEARCH PUBLICATIONS**

• Prof. Sagarika Behera of CSE department published research paper titled "A Multi Factor User Authentication Scheme for Three Party Authentication Key Exchange Protocol in Cloud Computing Environment" in 2ND International conference on Innovations in computing, Automation and Intelligent Information Systems (ICAIIS2019).

• Dr. Muralishankar R of ECE department published research paper titled "Performance Comparison of Joint Correlation and Improved Energy Detection for Spectrum Sensing" in IEEE DISCOVER 2019.

• Dr. Muralishankar R of ECE department published research paper titled "Voice Activity Detection Using Novel Teager Energy Based Band Spectral Entropy" in IEEE IEEE-4th International Conference on Communication and Electronics Systems (ICCES 2019).

• Prof.Chetan Gowda,Suganya S,Vinay B K of ECE department published research paper titled "Detection of Harmful Bacteria in Water Using PhC Sensors and Analysis of the Quality Factor" in Journal of Adv Research in Dynamical & Control Systems.

• Dr. P. Ramesh, Mr. D. Kodandapani, Mr.P. VelrajKumar of EEE department published research paper titled ""Harmonic Analysis of a Novel 17 - level M21 fed three phase Induction motor" in ICECA-2019(IEEEConference).

• Prof. Rajendra Padidhapu of BS department published research paper titled "Use of ANN models in the prediction of meteorological data" in Modeling Earth Systems and Environment., Springer

• Prof. Poonam Vijay Tiajre of CSE department published research paper titled "A Study on Fake News Detection Using NaïveBayes, SVM, Neural Networks and LSTM" in Jour of Adv Research in Dynamical & Control Systems.

• Prof. Rubini PE of CSE department published research paper titled "A Cardiovascular disease Prediction using Machine Learning Algorithms" in International Journal of Engineering and Advanced Technology

• Prof. Sagarika Behera of CSE department published research paper titled "A Multi Factor User Authentication Scheme for Three Party Authentication Key Exchange Protocol in Cloud Computing Environment" in Journal of Adv Research in Dynamical & Control Systems.

• Prof. Sagarika Behera of CSE department published research paper titled "A Secure Scheme for storing data on the cloud using Attribute Based Signatures and Block chain concept" in International Journal of Innovations in Engineering and Technology (IJIET) • Prof. Preethi Sheba Hepsiba of CSE department published research paper titled "Intelligent Scheduling of Bag-of -Tasks Applications in the Cloud" in International Journal of Advanced Computer Science and Applications (IJACSA), Scopus Indexed Journal

 Prof. Suganya S, Kusuma S Salanke ,Pallavi Subhash Jadhav of ECE department published research paper titled "Verification of AMBA AHBLITE protocol based on system verilog" in Jour of Adv Research in Dynamical & Control Systems

• Prof. Abhishek Javali of ECE department published research paper titled "Smart Cities: The Hopes and Hypes" in 5th Annual International Conference on Science and Emerging Technology, AASTU, Addis Ababa

• Dr. Ramesh P, Prof. M. Hari & Prof.Kodandapani D. of EEE department published research paper titled "Graphene as Solar PV Material" in International Journal of Recent Technology and Engineering (IJRTE)

• Dr. AGALYA V of EEE department published research paper titled "Application of AIS on Closed Loop Controller Design in Buck Converter" in International Journal of Recent Technology and Engineering (IJRTE)

• Dr. CHINNAIYAN R of ISE department published research paper titled "Reliable Constrained Application Protocol to Sense and Avoid attacks in WSN for IoT Devices" in ICCES 2019, IEEExplore

• Dr. CHINNAIYAN R of ISE department published research paper titled "Reliable Machine Learning Approach to Predict Patient Satisfaction for Optimal Decision Making and Quality Health Care" in ICCES 2019, IEEExplore

• Prof. RAVEESH HEGDE and Dr. R. Muralishankar of TCE & ECE department published research paper titled "Voice Activity Detection Using Novel Teager Energy Based Band Spectral Entropy" in 4th International Conference on Communication and Electronics Systems.

• Dr.Binish Fatimah, SHALINI VAIBHAV, SURYA SHREE, VIJAY LAKHMANI of ECE department published research paper titled "Fetal ECG Extraction Using ANFIS Trained with PSO" in NATIONAL CONFERENCE ON EMERGING TECHNOLOGIES ON COMPUTING AND COMMUNICATION (NETC 2)

• Prof.Sridevi S and Prof. S, Venkateswaran Krishnasamy of ECE department published research paper titled "ABS using Fuzzy Logic in MATLAB and Its Hardware Implementation" in International Journal of Recent Technology and Engineering (IJRTE)

 Prof. Pappa M, Dr. R Elumalai of ECE department published research paper titled "DESIGN A SENSOR MACH ZENDER INTERFEROMETER FOR OBSERVING THE CHEMICAL AND ORGANIC SUBSTANCES PRESENT IN FOOD AND HEALTH DRINKS in International Journal of Advanced Engineering and Technology

• Prof. Richa Tengshe of ECE department published research paper titled "Receive Diversity in Analog Feedback Communication in IEEE Phd EDITS 2019

• Prof. SHARMILA K.P and ANINDITA MUKHERJEE of ECE department published research paper titled "System Verilog Based Verification for Serial Peripheral Interface Protocol to Get Maximum Coverage" in Jour of Adv Research in Dynamical & Control Systems

• Prof. Chetan Gowda of ECE department published research paper titled "The Eective Transmission of Acquired Sensor data with FFT, DWT and DTCWT in Different Channel Environment in International Journal of Recent

Technology and Engineering (IJRTE)

• Prof. Geetanjali Sameer Pawanekar of EEE department published research paper titled "Research on Net Weighting Schemes in Performance Driven Global Routing" in International Journal of Recent Technology and Engineering(IJRTE)

• Prof. M Hari of EEE department published research paper titled "Isolated WECS connected SVM based Three Level NPC Fed 3-Phase Induction Motor" in ICCUBEA 2019

• Prof. Reshma P, Prof.Eldho,Prof. SREELAKSHMI C S,Prof. NITHARA P V,and Prof.M Hari of EEE department published research paper titled "V-F controlled wind energy conversion system using z2 transformer connected DSTATCOM" in IJEAT

• Prof. Kashif Ahmed, and Prof.CHITRA K of EEE department published research paper titled "Design and Implementation of a Solar Tree Structure for Ecient LED Street Lighting" in International Journal of Engineering and Advanced Technology (IJEAT)

• Prof. Mahesh Kumar Jha of TCE department published research paper titled "Generalized Spatial modulation for multi user in VLC" in Wireless and Optical Communications Conference (WOCC)

• Prof. Savitha Hiremath of ISE department published research paper titled "Semi-supervised domain adaptation and collaborative deep learning for dual sentiment analysis" in S N Applied Sciences, Springer nature

• Prof. Swathi Y of ISE department published research paper titled "Smart Home automation using IOT" in 4th International Conference on Inventive Computation Technologies (ICICT2019), Scopus Indexed Conference.

• Prof. Swathi Y of ISE department published research paper titled "Energy Aware Fuzzy Logic Secure Data Aggregation(EA-FSDA) technique for Wireless Sensor Networks" in IJEAT.

• Prof Bijayani Panda , ARPIT PANDE, MIHIKA NANDAKUMAR, PAVITHRA S of ME department published research paper titled "Feasibility study of diesel series hybrid system for three wheeler application" in WE local Bangalore 2019 conference held by Society of Women Engineers.

Prof. Gopi Sampangi Ramaiah and Abhinav Suresh of ME department published research paper titled "Value stream " Reverse Logistics & Open Loop Supply Chain: A Comprehensive review for the future" mapping & Manufacturing process design for Elements in an auto-ancillary unit – A case study"" in International Conference on Advanced Research in Mechanical Engineering (IC-ARME) 2019 organized by MVJ College of Engineering.

• Prof. Gopi Sampangi Ramaiah and Asher John Sathya of ME department published research paper titled "Role of Quality Circles & Total Quality Management Practices in an Indian Public sector Industry: A pilot Study" in ICETETM-2019 organized by PDIT, Hosapete Karnataka.

• Prof. Prashant S Hatti of ME department published research paper titled "Microstructure and Hardness behavior study of carbon nano tube in Aluminum nano composite" in International conference on Intelligent manufacturing and Energy sustainability.

• Prof. VIJAYANANDA KAUP, Prof. Harish Babu, Prof. MANIKANDAN HARIHARAN ME department published research paper titled "A New Computational Methodology for the Synthesis of Simple Jointed Kinematic

Chains" in AIP Conference proceedings.

• Prof. VIJAYANANDA KAUP,Prof. Harish Babu,Prof. MANIKANDAN HARIHARANof ME department published research paper titled "A In Quest of a Reliable and Ecient Isomorphism Index for Simple Jointed Kinematic Chains" in AIP Conference proceedings.

- Prof. VIJAYANANDA KAUP,Prof. Harish Babu,Prof. MANIKANDAN HARIHARANof ME department published research paper titled "In quest of a reliable and ecient isomorphism index for multiple jointed kinematic chains" in AIP Conference proceedings.
- Dr. Asha M Nair from Civil department has presented a paper entitled "Sustainable energy from pavements" in IconAMMA 2019.

#### SPONSORED RESEARCH PROJECT

- Sateesh.A,Sridevi S,,VIjayalaxmi A Aritri Debnath of ECE department received grant amount of Rs.6500/- for the project title "Portable and Cost effective basic diagnostic system" from Karnataka State Council for Science and Technology,IISc,Bengaluru
- Sateesh.A,Sridevi S,,VIjayalaxmi A Aritri Debnath of ECE department received grant amount of Rs.7000/- for the project title "Smart health care unit" from Karnataka State Council for Science and Technology,IISc,Bengaluru .

#### PATENT APPLIED

• Dr. Joshua Samuel Raj of ISE department filled a national level patent on "Garbage Waste Monitoring And Collection System With Reduced Human Intervention", Submission number – 201941026559.

#### FACULTY CONSULTANCY

• Prof. A J RUCHIR of Civil department received a grant from Sumangali Developers on "Concrete Cube compressive strength"

#### FACULTY AWARDS AND RECOGNITIONS

- Dr. Muralishankar R of ECE department received Awards for Research Publications (ARP) for the year 2018-19 by VGST.
- Dr. Fazlur Rahaman, Dr. Soma Das, Dr. Prabhat Gautam, Dr. Subhi Baishya & Dr. Priti Gupta of BS department has served as resource persons for one day FDP on "Advanced Material Characterization"
- Prof. GIRISHA .A of BS department has served as session chaired in young scientist award category in National conference on emerging trends in Engineering and Technology at Dr.Rammanohar Lohia Avadh University, Ayodhya .
- Prof. Karthik N M from civil department a served as trainer for civil 3D, along with Medini consultants at SIT Tumkur.
- Dr. Paras Nath Singh, Dr. Kavitha P, Prof. Yesudian Rajkumar JK, Prof. Gopika D, Prof. Preethi Sheba Hepsiba, Prof. Reshma Prakash Shet of CSE department has served as resource persons for AICTE sponsored 2 weeks FDP

ON "BIGDATA ANLYTICS & PYTHON PROGRAMMING".

- Prof. Venkateswaran Krishnasamy served as Resource Person at "Satellite Image Processing" under IETE forum, sri sowdambika college of engineering aruppukottai.
- Dr. Muralishankar R served as Journal Reviewer for "CSNT 2020 (9th International Conference on Communication Systems and Network Technologies 2020.
- Prof. Chetan Gowda served as Resource Person at "Mentoring program of IEEE Photonics Society for the term Aug-Dec 2019. " under IEEE Technical Society.
- Prof. Venkateswaran Krishnasamy of ECE department served as expert panel on Coordinated online training course for satellite remote sensing for air pollution studies at ISRO
- Prof. GIRISHA . A served as BOE for Pre- submission colloquium presentation at Ambedkar Institute Of Technology, VTU
- Dr Shankar Ramamoorthy of ISE department recieved award for "Next Generation Thought Leader in Software Testing" by Unicom International, UK.

#### FACULTY CULTURAL PROGRAM

The group dance called Thiruvathirakalli by Dept. of EEE received top performance award. The team members were Ms. Sanitha Michail C, Ms. Anju Das, Ms. Keka Mukhopadhyaya, Ms. Geetanjali Pawanekar, Ms. Chithra M, Ms. Reshma P Eldho, Ms. Nithara P V, Ms. Ranjitha R



### FACULTY **SPORTS**

FACULTY SPORT WINNERS				
	FIRST	SECOND	THIRD	
BADMINTON- MEN	Mr. SHIV KUMAR M J	Mr. SHASHANK DUBEY	Mr. KASIF AHMED /	
			Dr. FAZLUR RAHAMAN	
BADMINTON -WOMEN	MS. SWATHI SHARMA	MS. PRETI GUPTA	MS. AKHILA /	
			MS. SOUNDARYA	
TABLE-TENNIS MEN	MR. AKHIL C	MR. PHANI RAJ	Mr. PHANI KUMAR P / Mr. SHASHANK DUBEY	
TABLE-TENNIS WOMEN	MS. SHAHINA PRAVEEN	MS. RUCHI JAIN		

Faculty cricket tournament was also held with multiple teams of CMRIT staff comprising of staff from all departments participated in it.



# FACULTY AWARDS 2019 " A RECOGINITION OF EXCELLENCE"

### **Graduation** Outcome

Prof.Reba Kunda	EEE
Prof.Sreelakshmi CS	EEE
Prof.Prashanth Hatti	MECH
Prof.Savitha S	CSE
Prof.Dhanya Viswanath	ISE
Prof.Sherly Neol	CSE
Prof.Deepa Anand	ISE
Prof.Sheetal	ISE
Prof.Vidya U	ISE

## Skill training and Transformation

Prof.N.Puneeth	MECH
Prof.Helen Josephine	MCA
Prof.P.N.Singh	CSE
Prof.D.Gopika	CSE
Prof.Akhilaa	ISE
Prof.Daya Thummar	MCA
Prof.Sachin	T&P

### **Processes and perception**,

Prof.Sunil Kumar	ECE
Prof.Preeti Sheeba Hepsiba	CSE
Prof.R. Chinnaiyan	ISE
Prof.David	T&P

## Faculty knowledge and skills

Prof.Ruchir A J Prof.Bijiyani Panda CIVIL MECH

### **Experiential** Learning

Prof.Binish Fatima	ECE
Prof.Nazir Abdul	ECE
Prof.Amit Jain	ECE
Prof.Vinay B K	ECE
Prof.Sagar M B	MECH
Prof. Anand R	ISE
Prof. Karthik N M	CIVIL
Prof.Chetan	ECE
Prof. Sridevi	ECE
Prof.Vijayalakshmi	ECE
Prof.Aritri	ECE
Prof.Deepa Pradeep	TCE
Prof.Savith N J	CSE
Prof. P. Kavitha	CSE
Prof.Vivia John	CSE
Prof. Anujose	ISE
Prof.Kashif Ahmed	EEE
Prof. Sherly Noel	CSE
Prof.Jhansi Rani	CSE
Prof.Cyril S	MECH
Prof.Bharti Sharma	BSH
Prof.Vinay M N	MECH

### Pedagogy Creativity, Participation

Prof.Poonam Vijay Tijare	CSE
Prof.Priyadarshini A	ISE
Prof.Shilpa	ISE
Prof.Sudhakar K N	ISE
Prof.Sandeep	MBA
Prof.Shashank D	MECH

# FACULTY AWARDS 2019 " A RECOGINITION OF EXCELLENCE"



## **Co-curricular** learning

Prof. Sachin	ECE	Prof.N. Soundarya	CIVIL
Prof. Manohar	ECE	Prof.Sherrin Joseph	CIVIL
Prof.Rahul Tiwari	ECE	Prof.Shivakumar M J	CIVIL
Prof.Krishna Teja	ECE	Prof.Harish	MECH
Prof.Parvathy Tampi	EEE	Prof.Moumita Roy	MCA

#### **Results and Feedback**

Prof.Harsha B K	ECE	Prof.Kiran	CSE	Prof.Prabhat Gautam	BSH
Prof.Naveen Kumar G N	ECE	Prof.Shreyas P	MECH	Prof.Asha K N	BSH
Prof.Nini Krishna	ECE	Prof.Manikandan	MECH	Prof.Sudarshana R	BSH
Prof.Chithra Manivelan	EEE	Prof.Neha Agarwal	MCA	Prof.Kodandapani D	EEE
Prof.Raveesh Hedge	TCE	Prof. Vakula Rani	MCA	Prof.S. Shankar Narayan	BSH
Prof.Reshma Prakash Shet	CSE	Prof.Varsha Pawar	MCA	Prof.Soma	BSH
Prof.Sagarika	CSE	Prof.Priti Gupta	BSH	Prof. Shyamsundar Hedge	BSH
Prof.Mariet Susanna Furtado	CSE	ALL STREET		Prof.Tukaram	BSH

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Prof.Sharmila K P	ECE	Prof.Farida	ISE	Prof.Manjunath	BSH
Prof. Manoj Challa	CSE	Prof. Phaniraju	CIVIL	Prof.Raveesha	BSH
Prof. Kashif Ahmed	EEE	Prof.Asha M	CIVIL	Prof.Chaitanya	BSH
Prof. Swathi Y	ISE	Prof.Srinivas Reddy	MECH	Prof.Meenakshi	BSH
Prof. Jhansi Rani	CSE	Prof.Rajendra Prasad	MECH	Prof.Phani Kumar	BSH
Prof.Sanitha	EEE	Prof.Vijayanand	MECH	Prof.Lakshman	T&P
Prof.Pappa	ECE	Prof.Ilango	MCA	Prof. Mahesh Kumar Jha	TCE
Prof.Prasad B S	ISE	Prof.Gomathi T	MCA	Prof. Naresh Dixit	CIVIL
		Prof. Fazlur Rahaman	BSH	Prof. Shobit	PED



S.No	Date	Activity	Department/Cell
1	4 <sup>th</sup> Sep 2019	Introduction to Linux and basic Networking related commands-GLUG	FOSS Cell
2	6 <sup>th</sup> Sep 2019	CNC router training for faculty	MakerSpace
3	12 <sup>th</sup> Sep 2019	Guest Lecture by Dr.Selvaraj Vadivelu ,AVP,Sasken Technologies Limited	CSE
4	12 <sup>th</sup> Sep 2019	Workshop on Machine Learning by Bharath.K Analytica 6, Bangalore	ISE
5	13 <sup>th</sup> Sep 2019	Guest Lecture on "Chalcogenide glass" by Dr. K.Ramesh, Scientist, Dept. of Physics, IISc, Bangalore	Physics - BSH
6	13th & 14th Sep 2019	Workshop on "Control System Design for Industrial Machines" by Kotresh, Indian Tech Keys, Bengaluru	EEE
7	21st Sep 2019	Workshop on Stress Management and Time Management	IQAC
8	26 <sup>th</sup> Sep 2019	Hands on workshop on internet of things using RaspberryPi	ECE
9	27 <sup>th</sup> Sep 2019	Inter-collegiate technical context: "Technovation"	MCA
10	27th Sep 2019	Industrial Visit to Satellite Control Facility Hassan	TCE
11	30 <sup>th</sup> Sep 2019	C-QUEST	PBC Cell
12	4/5 <sup>th</sup> Oct 2019	SPARDHA-Intercollegiate sports Fest 2019	Sports
13	16 <sup>th</sup> Oct 2019	Guest Lecture on " Energy Storage devices"	Chemistry - BSH
14	19 <sup>th</sup> Oct 2019	Guest Lecture on "Advanced Materials", by Dr Raghotham Rao Ex-Scientist CEMLAC	Mechanical
15	21st to 23rd Oct 2019	Mini Project Display	AE Cell
16	26 <sup>th</sup> Oct 2019	Industrial visit to BWSSB wastewater treatment plant	CIVIL
17	31 <sup>st</sup> Oct 2019	Student Seminar Competition on Calculus and Linear Algebra	Mathematics - BSH
18	Oct & Nov 2019	Hackathon on C++, Java, Python, Full stack/ML/ Big data/ Data Analytics/ Cloud Open to All Students	SC&A Cell
19	Oct 2019	SIH guidance & information sessions	I&E
20	2 <sup>nd</sup> Nov 2019	Kannada Rajyotsava Celebration	•
	20 <sup>th</sup> Nov 2019	Marketing game- MBA marketing club activity	MBA

## STUDENT COUNCIL



### STUDENT COUNCIL 2019 - 20



PRESIDENT





MECHNA MENON SHRIKESH SURESH SECRETARY TREASURER



**CHANDRAMA BHOWMIKA V ABHISHEK** SENIOR TECHNICAL SENIOR CULTURAL PUBLIC RELATIONS SECRETARY SECRETARY



SHWETHA SATISH SECRETARY



BURHANUDDIN PRATHAM T KHOMOSI

**BOYS HOSTEL SECRETARIES** 





**AISHWARYA B S** SHRAVANI **GIRLS HOSTEL SECRETARIES** 









NISHANTH V R SNEHA M.MANI CULTURAL SECRETARIES





SATISH KUMAR KRISHNA **TECHNICAL SECRETARIES** 



HARSHITA CHAMAN R SPORTS SECRETARIES





NISARGA G ABHINAB MISRA LITERARY SECRETARIES

## **ALUMNI ASSOCIATION**

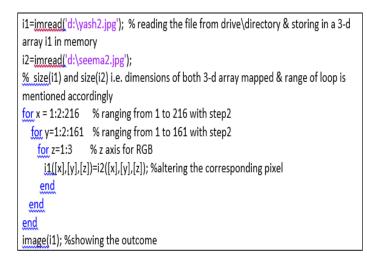
- During first year induction program Dr. Sumeet kumar, CMRIT Alumnus & CEO Innatera Nanosystems had a skype interaction with all first year students on Lessons for careers in Technology, Inculcate Critical thinking, deeper understanding.
- In first year induction program Dr.Mayuri, CMRIT Alumnus Post Doctoral Fellow, Physics Division Lawrence Berkeley National Laboratory had a skype interaction with all first year students on Engineering to Astronomy, diverse career opportunities after engineering course.



## METAMORPHOSIS OF IMAGES

An RGB image can be viewed as combination of 3 different colours RGB(red, green & blue) in "Pixel resolution ratio" (usually from 0 to 255). In other words Pixel of an RGB image are formed from corresponding pixel of these 3 combination of RGB. (A gray image is stored simply in 2-d array.)

This way in MATLAB, an RGB image is stored in a 3-Dimensional array of size M\*N\*3 where each colour pixel is associated with 3 values (Red, Green & Blue). If an RGB image is of class "uint8" the range of values will be 2^8 = 256-1 i.e. 0 to 255. So, total number of combination of colour shades can be represented is 256^3 = 16777216. The number of bits used to store a pixel value of component image determines the bit depth of an RGB image. I wanted to check & show outcome practically alternating the pixel (stored in 3-d array) of two files seema2.jpg and Yash2.jpg. Both images with output are shown below after successfully executing the code in MATLAB. If images were captured from front (90 degree oe in same angle) then result would be better.



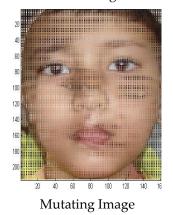
The fitness is measured by comparing each pixel of the generated image with the corresponding pixel in the target image. We can apply Genetic Algorithm by this (not biologically) for genetic transformation of images.



Mother's Image



Son's Image



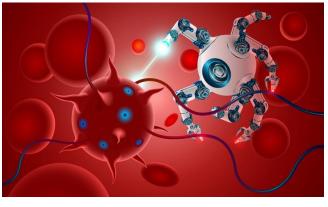
DR. P. N. SINGH, PROFESSOR(CSE), CMRIT

## NANO ROBOTS FOR HEALTH CARE

The health care industry of today is focusing on developing minimally invasive techniques for diagnosis, as well as treatment of ailments. The most promising development in this field involves marriage of the latest nonmaterial science and robotics technology with biological knowledge Nanorobotics. Advances in technology have increased our ability to manipulate the world around us on an ever-decreasing scale. Nanotechnologies are rapidly emerging within the realm

of medicine, and this subfield has been termed nanomedicine. Use of nanoparticle technology has become familiar and increasingly commonplace, especially with pharmaceutical technology. An exciting and promising area of

nanotechnological development is the building of nanorobots, which are devices with components manufactured on the nanoscale. Nano robots will be able to repair damaged or diseased tissues. The circulatory system is the natural path for these devices and the nano robots will pass through the blood stream to the area of defect. They attach themselves to specific cells, such as cancer cells and report the position and structure of these tissues. A creative methodology in the use of these devices to fight cancer involves using silicon nano machines with a thin coating of gold and light in the near infrared spectrum.



You a tablet the doctor implants a tiny robot into your bloodstream. Light in the 700-1000 nanometer range will pass through the tissue and reaches the defective cell. When this infrared light strikes the particular type of nano robot, the device gets hot due to the oscillation of the metal's electrons in response to the light. Using an MRI, the nano robot is specifically placed in the cancerous region, and then the light causes the devices to heat to 131 degrees Fahrenheit which destroys the cancerous cells but

doesn't damage surrounding tissues.

This is the new technology, without any drawbacks. These nano robots can cure any disease without affecting any other cells or tissues. The

future vision: Imagine going to the doctor to get treatment for a fever, instead of giving the robot detects the cause of your fever, travels to the appropriate system and provides a dose of medicine directly to the infected area. This is going to happen in a few years of time from now. Each person is going to have a nano robot in his body which is going to monitor human body system. So the time arrives to enjoy with the robot within our self.

#### MR.SATISH KUMAR SAHU

1CR18MCA21

### SELF DRIVING CARS

The concept of a self-driving car, at first glance, seems to have emerged sometime during the early years of the twenty-first century. But experiments concerning automated driving systems have been conducted since at least the 1920s. Over the years, there have been several attempts made to build a car that is capable of sensing its surroundings and moving safely with little or no human input. Since experiments have been conducted from the last century, the idea of how a self-driving car should work has always been subjective and this has led to inconsistency. Fortunately, SAE international, a U. S. Based global standards organization came up with a specification titled 'SAE J3016' that helps us categorize a self-driving car depending upon the level that it belongs to. J3016 specifies 5 levels that help us categorize these cars level 1 corresponds to primitive self-driving cars whereas level 5 corresponds to cars that are fully autonomous and robust when compared to their primitive counterparts. So far, we have only been able to produce cars that are level 3. It should take us another decade or two to be able to produce cars that can be categorized into level 4 and 5.

More often than not, people do not follow lane discipline and driving etiquette which leads to accidents that can sometimes be fatal. With level 4 and 5 autonomous cars on the road, we should be able to minimize these. Also, elderly persons and persons with disabilities can be impacted positively with the advent of self-driving cars. They would no longer need to rely on somebody else to reach the destination of their choice. Also, as cars become more autonomous, they would have improved in other aspects as well. A self-driving car from the future, being a large scale IoT device, should provide better security and integration with other IoT devices. The AI in self-driving cars should also have evolved to make our lives easier. Traffic congestion continues to be a multi-trillion-dollar drain on the global economy and self-driving cars can easily be a part of the solution that is yet to be devised but is the need of the hour.

We can all agree that every technology has its fair share of cons as well and the concept of self-driving cars is not to be exempted. It is estimated that autonomous cars could eliminate 300,000 driving jobs a year, according to a May 2017 report from Goldman Sachs. Finally, to top it off, self



-driving cars bring the infamous 'Trolley Problem' to the table. Should a self-driving car kill the baby or the grandma depends on where we are from. In 2014, Researchers at the MIT Media Lab designed an experiment called Moral Machine, a platform for gathering a human perspective on moral decisions made by machine intelligence, such as self-driving cars. The researchers concluded that different cultures emphasized saving different lives, although they also believed the research could have been skewed given that the participants were more likely to be interconnected.

## SOLAR ENERGY PRODUCTION IN MAJOR CITIES

India currently faces an acute problem of power shortage. India loses about USD 68 billion (Rs.4,14,800 crore) of its GDP due to electricity shortage. Indian cities are facing power shortages from all central, state & independent generating stations. With persistent global warming threat, conventional generation sources (tidal, hydro, thermal) plants are facing major perplexities. Additional problem of faulty cables, lack of infrastructure & equipment shortage further compound this problem.



A remedy is the large scale use, production & promotion of solar energy in major cities with an aim to make them self-sustainable. A major component of this proposal is the use of present infrastructure in cities. An example cited is the Flemington market in Sydney, Australia. Flemington Market's installed solar systems – which includes small sets of panels over its carpark – consists of nearly 8600 solar panels and generates more than 3MW, providing about 11% of the group's annual power consumption. Similarly, Study



Town (New-York) is installing around 9,671 panel array which will be largest private multi-family rooftop in the US. This will generate enough energy to power 1,035 typical New York apartments each year. It's equivalent to removing 11,972 cars from road & reducing carbon dioxide emissions by 62,472 tons.

Government shall also promote these initiatives through incentives. Likewise The New York solar program offers incentives of free installation charges & an income tax credit(25% cost of system). Meanwhile The London mayor's Solar Together scheme offers to purchase & install high quality solar PV panels for households on their behalf.

In conclusion, similar practices shall be undertaken by the Indian government in major Indian metropolitan cities. This will reduce the stress on conventional generating stations & aid in the National Solar Mission, which aims to achieve a total installed solar capacity of 100 GW by 2022.

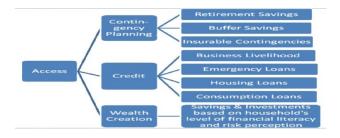
#### MR. RAKTIM DUTTA (1CR16EE058)

# NON-TECHNICAL ARTICLES

#### "Poverty is the worst form of violence."- Gandhi

#### Household Access to Financial Services:

Financial access, or the household use of formal financial services, includes the ability to access transaction, credit, and investment products and services from formal financial institutions.

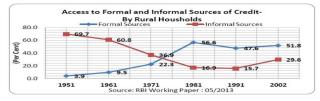


#### Why Financial Inclusion?

By bringing low income groups within the perimeter of formal banking sector; financial inclusion protects their financial wealth and other resources in exigent circumstances

#### Access to Formal and Informal Sources:

From the period of five decades, there has been overall improvement in access to formal sources of credit by the rural households.

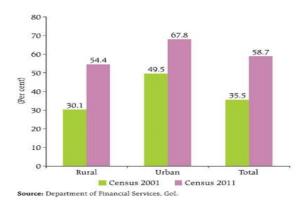


#### Availing of Banking Services:

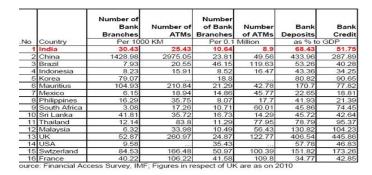
**CRISIL Financial Inclusion Index (Inclusix):** In June 2013, CRISIL first time published a comprehensive financial inclusion index (viz.,Inclusix).For constructing

the index, CRISIL identified three critical parameters of basic banking services namely branch penetration5, deposit penetration6 and credit penetration7.

#### Select Indicators of Financial Inclusion:



- Basic Saving Bank Deposit (BSBD).
- Relaxed and simplified KYC norms.
- Simplified Branch Authorization Policy



#### **Conclusion:**

By bringing low income groups within the perimeter of formal banking sector; financial inclusion protects their financial wealth and other resources in exigent circumstances.

#### HEMASHREE & CHITANYA G

MBA- 3rd Sem

## FINANCIAL INCLUSION IN INDIA

## NON-TECHNICAL ARTICLES

### MUSIC

Music is a form of art of expressing emotions in sound forms through rhythm, melody and harmony. Everyone of us listen to music. For it can be a stress-buster or even a pass time. Music can be made from instruments or even our voice. Based on different key factors music instruments can be classified into 5 types - string, wind, percussion, brass, keyboard instruments. The oldest instrument is the flute which is estimated to be 40000 years old.

Music has a lot of benefits too, from relaxing the mind to being a form of medication, it plays a vital role in our lives. Firstly music enhances the skill of creativity and imagination. Also it is a medium of expressing our emotions and thoughts. Some people say music touches the heart, but in reality it is more related to our brains. Students who have early music training will develop the areas of the brain related to language and reasoning. The left side of the brain is better developed with the music. So music not just emotionally, but even intellectually helps us. It even helps us to socialize and communicate. Music is a universal language, different regions of different countries have unique style of music. It is often referred as genres. The music of a particular region says a lot about their culture and traditional practices of the people.

Music has various health benefits too. It is a powerful tool to treat patients suffering insomnia. Also it treat certain mental ailments such as depression, anxiety. It is universal language not just for humans, but also for the Flora and fauna.

#### Indian music:

India is a country known for its rich history, culture and tradition. The music here is no different in terms of it's history, styles and genres. In madhya Pradesh a 30,000 year old cave painting at UNESCO world heritage site showed music instruments and dance. Another scripture was found from Indus valley civilization which is estimated to be from 2500 BCE. The Indian classical music has a history spanning over millennia and it includes Hindustani and carnatic. Both Hindustani and carnatic music have been evolved from the saamaveda and for several centuries both were actually a single entity, until the Islamic invasions which altered and influenced the Indian classical music and gave birth to then new style of music called Hindustani music. Thus the Carnatic music is the oldest and purest form of the Indian classical music. Indian classical music comprises of very large components of styles, raagam, taalam, etc. It is very vast compared to the Western classical music. Infact the entire Western music can be considered as a small part of Indian classical music. For instance in Western classical there are scales - major, minor, diatonic, pentatonic etc... which is known as raagam in classical Indian music, there are 72 melakarta raaga and a total of 34848 number of raagam in Indian classical compared to a few Western classical scales. Indian classical music itself is like an ocean and lot to go about it.

In general music has magical powers and it's experience and benefits are subtle and beyond the expression of words. MR.AMOGH J (1CR16CV005)

### **TESTIMONIALS**



SUKANYA P VTU RANK HOLDER On the very first day of my College Life, I was very nervous and thinking about faculty, my fellow Students and Seniors. I had great journey with the best and knowledgeable faculty members. My faculty members made me comfortable and always helped to motivate myself to greater heights. Their expectation and belief made me to excel in the academics and stood as VTU Rank holder. I always cherish all those moments and experiences I went through as a student of CMRIT. I am always proud to be part of this institution.

CMRIT has a good quality of classrooms and labs. It has one big library which is present in the basic science block. The library provides many modern facilities like ebooks, etc. Wi-Fi facility is provided to everyone. Medical facilities are also present, i.e., first-aid kit and other necessary things are available during emergencies. The campus has a basketball court, volleyball court, and a playground for football and practice net for cricket. Thus, I can assure that one would surely like the infrastructure of CMRIT due to its location.



SURESHA S SENIOR SUPERVISOR HAL AIRCRAFT DIVISION

Teachers here are very helpful. They don't get irritated if you ask them to teach

the same topic again and will teach you until you understand. They are highly qualified and are from renowned institutions and also highly experienced, and the best part about them is that they not only focus on the students who are good at studies, but they also focus on the students who learn slowly. The college has good placements and students got highest package up to 15 lakhs per annum which is a nice package. College conducts many events like TEDx CMRIT, Hackathons and much more. Cultura is the college fest which is celebrated for 2 days with more number of events, and students are given prizes. College also provides scholarships to meritorious students and achievers in sports. This is a good initiative by our college to encourage students to study well and also to excel in sports.



I would like to take this opportunity to thank faculty of Telecommunication Engineering for playing your part in shaping our careers. I am proud that I belonged to the Dept. Of Telecommunication with amazing faculty and super cool HOD who supported us during our times of need and for all their efforts in getting our batch students placed. Most importantly

Mr. STANY ANTHONY BUSINESS ANALYST DELOITTE CONSULTING US-INDIA PVT LTD Thank you that you chose to teach, chose CMRIT and finally chose TCE.

### **TESTIMONIALS**

My experience with CMR Institute of Technology has been excellent so far. The practical and theoretical education cultures maintained by the college are exemplary. My daughter has indeed grown and matured during this time with the college and he has vastly benefited from working with the experienced teaching staff. Based on the reviews I got from my son, I firmly believe that the faculty is helpful and having expertise in their respective domains. I had a pleasant experience with the administration and did not face any arduousness in the course of time. In a nut shell, it has been a sheer pleasure to get my son admitted in CMR



MOHAN I E AGRICULTURIST

Institute of Technology. We appreciate the education and extracurricular opportunities given to students and having wonderful teaching staff is one of the best that we have noticed. Placement training plan it's quite good.

My undergraduate degree from CMRIT has underpinned my career, and given me the confidence and tenacity I needed to succeed. It helped me develop the foundations of technical understanding and key competencies on



SANDHYA RAMASUBRAMANIAN ASIC DIGITAL DESIGN ENGINEER ON SEMICONDUCTOR

which I have been able to build upon. The strategic problem solving, application of logic and pragmatism I learnt helped me progress in algorithm development and designing at embedded and semiconductor companies. It is not only the technical knowledge but other competencies such as the ability to lead and work as a team, communicate ideas and analyze situations that are valued, encouraged and rewarded at CMRIT. They promote development of these skills in their courses by encouraging students to work in teams, present projects, write reports, attend tutorials and participate in practical labs. The faculty is always available and willing to help. My learnings here are the skills that put me ahead.

Four years of my Civil Engineering degree are the most memorable days of my life....I graduated from CMRIT in 2015. I selected Civil Engineering discipline and it was new to CMRIT itself. We are the youngest civil engineers from CMRIT. The whole civil engineering department was very supportive and friendly. They teach us each and every topics clearly and perfectly. I am sure that notes given by the teacher definitely

helps us during the exams. Finally I am proud to say I am a CMRIT civil engineer gradaute and all credits go to my civil engineering faculty.



Mr. NAGARAJ SENIOR ENGINEER SOBHA LIMITED COMPANY



## VISION

"To be a nationally acclaimed and globally recognized institute of engineering, technology and management, producing competent professionals with appropriate attributes to serve the cause of the nation and of society at large"

## MISSION

### CMRIT seeks to realize its Vision with a Mission to:

- Create the necessary infrastructure appropriate to the needs of the programmes and activities of the institution.
- Attract and retain well-qualified faculty and supporting staff.
- Create and facilitate an ambience for interdisciplinary engagement, leading to a healthy competition among students and staff, in pursuit of excellence through lifelong learning.
- Develop and operate mutually-beneficial programmes, partnering with industries, institutes and individuals of national and international repute.
- Create mechanisms to understand societal needs and provide solutions for the betterment of society.

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